

Course Syllabus – Computer Aided Drafting

Assignment Code

Course Description

Aim: People with careers in design and pre-construction create our future. They turn a concept into a set of plans whether it's a component, a system, or a building. Their plans guide other construction or manufacturing professionals as they continue the building process. Students use Computer Aided Drafting software used by a skilled draftsman or engineers.

Grade Level: 9th - 12th Grade
Prerequisites: None

Length: Semester Course
50 min. period

- **Topics Covered:**
- CAD Basic Operations
- Illustrate layers
- Create blocks and attributes
- 3D drawings
- Orthographic projections
- Drawing and Plotting drawings to scale
- Math and Reading skills

Instructional Philosophy and Delivery Plan

Expectation: Students will be expected to meet all the course goals by demonstrating their understanding of the basic concepts of each topic area. In order to pass the course students will need a minimum of 68%.

Delivery Method: Instruction will consist of individual hands on activities and projects, group work, lecture, discussion, reading, writing, self-assessment, and the use of technology. Skills USA projects can be incorporated into the course.

Community Involvement: Guest speakers from local business such as Architectural firms, Industry Engineers, and lumber yards will be brought in throughout the course. Learning trips will be taken for various units in the course. Students will also have to use community resources to complete individual and group projects.

Assessment: Students will be graded on the following items: presentations, written reports, tests, daily work, group work, and individual projects.

Course Standards

CAD1.1. Identify CAD skills and applications of technical design

CAD1.2. Apply CAD defaults and preferences to set up a drawing

CAD1.3. Identify proper terminology and examine career possibilities
CAD2.1. Create multi-view and orthographic projections
CAD2.2. Illustrate layers with appropriate characteristics
CAD4.1. Create and plot drawings to scale
CAD2.4. Create blocks and assign attributes to various projects
CAD2.5. Illustrate isometric and pictorial drawings
CAD3.1. Illustrate 3-D drawings and create orthographic projections
CAD2.3. Define dimensioning styles and techniques on metric and imperial drawings

Major Course Projects

- Reverse Engineering of an Existing Part
- A 2-D assembly drawing of a Vise Clamp
- 3-D models of various everyday objects
- Research Careers and Employment possibilities

Assessment Plan & Grading Scale

Grade Scale		Description of Work
A	92 -	Consistently demonstrates an exceptional level of quality and effort. Having all work in on time and completed to exceed expectations. Mastery in evaluating, synthesizing, and applying the knowledge.
	100%	
B	84 -	Consistently demonstrates proficient knowledge with a good effort and quality of work. All assignments are complete and on time. Demonstrates the ability to evaluate, analyze, synthesize and apply the principles.
	91%	
C	76 -	Demonstrates proficient knowledge and the ability to apply knowledge. Work shows average effort. A few assignments may be missed or late.
	83%	
D	68 -	Work shows minimal effort and some assignments are late. Demonstrates a basic understanding of recalling or comprehending knowledge
	75%	
F	Below	Understanding is below basic. Work is of poor quality and does not meet standards or expectations.
	68%	